



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D350-591-214
Job Sheet 180683



Part No: D350-591-214

Job Qty: 4 ea

Part Name: Heli-Access-Step™ RH - High Gear, Short Step, Aerazur Float Compatible



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 7/12/18

Job Tracking No:

Due Date: 8/3/18

Created By: Linda Lacelle

Type: SOLD

Description:

Note: DWG REV H IPP Rev:B 05.10.14 Modified step 10 KJ/EC IPP Rev:C 06-06-19 Added D2732-030 AS PER DSI9294 JLM IPP Rev:C 06-06-27 Revised as per DSI9340 JLM IPP Rev:D 10.11.15 update qty on AN4-11A DD ver:EC IPP REV:E 14.12.17 ADD DSI9712-011 DD VERF:JLM IPP REV:F 16.03.16 IIN REV.H DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	4 Ea	8/3/18	8/3/18	0.00	0.00	Start Up Stores/Pkg-2		JUL 25 2018
270	Packaging	4 pcs	8/3/18	8/3/18	0.00	0.00	Packaging1-3		SEP 20 2018
280	QC	4 pcs	8/3/18	8/3/18	0.00	0.00	QC4		SEP 20 2018
290	Packaging	4 pcs	8/3/18	8/3/18	0.00	0.00	Packaging3-1		SEP 20 2018
295	DC	4 pcs	8/3/18	8/3/18	0.00	0.00	DC		SEP 20 2018
300	QC21-FG	4 Ea	8/3/18	8/3/18	0.00	0.00	QC21		SEP 20 2018

Part Op 290 - Identify and pack for shipping as per PPP D350-591-214 Location:FG039

Descriptions: 295 - Photocopy bluefile and type labels as per PPP D350-591-214 CHG005

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
AN3-35A	Bolt	8 Ea (2 ea)	90-Start up Operation	5067891
AN4-15A	Bolt	16 Ea (4 ea)	90-Start up Operation	5057424
AN5-36A	Bolt	8 Ea (2 ea)	90-Start up Operation	5071345
D2230-3	Mounting Lug	8 Ea (2 ea)	90-Start up Operation	516323
D2618	Bushing	8 Ea (2 ea)	90-Start up Operation	5082225
D2732-030	Rubber Cushion - 3"	16 Ea (4 ea)	90-Start up Operation	5082726
D3235-1	Mounting Lug	8 Ea (2 ea)	90-Start up Operation	5084615
D3338-1	Mounting Lug	4 Ea (1 ea)	90-Start up Operation	5080379
MS21042L3	Nut	8 Ea (2 ea)	90-Start up Operation	5078167
MS21042L4	Nut	24 Ea (6 ea)	90-Start up Operation	5089365
MS21042L5	Nut	8 Ea (2 ea)	90-Start up Operation	5058178
NAS1149D0363J	Washer	16 Ea (4 ea)	90-Start up Operation	5068666
NAS1149D0463J	Washer	48 Ea (12 ea)	90-Start up Operation	5091558
NAS1149D0563J	Washer	16 Ea (4 ea)	90-Start up Operation	5068662 X 8 5093773 X 8
D3078-042	Step Assembly, Hi Short RH	4 Ea (1 ea)	270-Packaging	5092547 X 3

5067963

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																						
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Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																																						
Dart Aerospace Ltd. 1270 Aberdeen Street Newmarket, ON N4B 1K7 CANADA TEL.: 1 813 632-5200 Email: sales@dartaero.com www.dartaerospace.com Container No: S096371 Part: D350-591-214 Job No: 180683 Serial No/Batch: S096371 Revision: _____ Inspector: _____ Exp Date: _____ Instructions: TC STC SH92-6 Issue 1dcrFA235STC SH967NE 04/12/21, BRAZIL 1				Completed By																																																						
				Lead hand / Supervisor Approval Verification																																																						
				QC / QA Coordinator Approval																																																						
Root Cause <table style="width:100%;"> <tr><td>Environment ☐</td><td>No Re-verification ☐</td></tr> <tr><td>Design ☐</td><td>Operator ☐</td></tr> <tr><td>Doc/Data ☐</td><td>Offset/Setup ☐</td></tr> <tr><td>Equip/Tooling ☐</td><td>Supplier ☐</td></tr> <tr><td>Handling/Pre ☐</td><td>Training ☐</td></tr> <tr><td>Material ☐</td><td>Use for Testing ☐</td></tr> <tr><td>Internal Transport ☐</td><td>Poor Information ☐</td></tr> <tr><td>Tribal Knowledge ☐</td><td>Rushing ☐</td></tr> <tr><td>LOA ☐</td><td>Product Improvement ☐</td></tr> <tr><td>Substation ☐</td><td>Process Improvement ☐</td></tr> <tr><td>Past Expiry Date ☐</td><td>Manufacturing Process ☐</td></tr> <tr><td>Misidentified ☐</td><td>Past Due ☐</td></tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	<table style="width:100%;"> <tr> <td>☐ Cuffs</td> <td>☐ Contamination</td> <td>☐ Positioned Wrong</td> </tr> <tr> <td>☐ Crushing</td> <td>☐ Countersink</td> <td>☐ Outside Dimensions</td> </tr> <tr> <td>☐ Heat Treat</td> <td>☐ Cut Too Short</td> <td>☐ Over/Under tolerance</td> </tr> <tr> <td>☐ Wave/Twist in Tube</td> <td>☐ Instructions Incomplete/Unclear</td> <td>☐ Part Incorrect</td> </tr> <tr> <td>☐ Marks/Chatter</td> <td>☐ Drill Holes</td> <td>☐ Part Lost/Missing</td> </tr> <tr> <td></td> <td></td> <td>☐ Part Moved</td> </tr> <tr> <td></td> <td></td> <td>☐ Drawing</td> </tr> <tr> <td></td> <td></td> <td>☐ Finish</td> </tr> <tr> <td></td> <td></td> <td>☐ Misread</td> </tr> <tr> <td></td> <td></td> <td>☐ Turning Sequence</td> </tr> </table>			☐ Cuffs	☐ Contamination	☐ Positioned Wrong	☐ Crushing	☐ Countersink	☐ Outside Dimensions	☐ Heat Treat	☐ Cut Too Short	☐ Over/Under tolerance	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Part Incorrect	☐ Marks/Chatter	☐ Drill Holes	☐ Part Lost/Missing			☐ Part Moved			☐ Drawing			☐ Finish			☐ Misread			☐ Turning Sequence
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OTHER : _____																																																										

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	AN3-35A	8	380	0
	AN4-15A	16	445	0
	AN5-36A	8	324	0
	D2230-3	8	247	0
	D2618	8	511	0
	D2732-030	16	71	0
	D3235-1	8	273	0
	D3338-1	4	19	0
	MS21042L3	8	1,920	0
	MS21042L4	24	3,914	0
	MS21042L5	8	870	0
	NAS1149D0363J	16	1,444	0
	NAS1149D0463J	48	7,036	0
	NAS1149D0563J	16	1,587	0
270-Packaging	D3078-042	4	0	0

Part Specifications

Specifications could not be found.

Plex 7/12/18 7:26 AM dart.lacelle.linda

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

PAGE 1 OF 1

Description: HELI-ACCESS STEP, HIGH SKID, SHORT STEP, LH/RH

H:\Forms\Engineer\Approved Eng Online\CHGREC revB

Qty -213	Qty -214	Qty -215	Qty -216	Qty -311	Qty -312	Part Number	Description
X						D350-591-213	Heli-Access-Step™, Short Step – High Skid, LH
	X					D350-591-214	Heli-Access-Step™, Short Step – High Skid, RH
		X				D350-591-215	Heli-Access-Step™, Short Step – Low Skid, LH
			X			D350-591-216	Heli-Access-Step™, Short Step – Low Skid, RH
				X		D350-591-311	Heli-Access-Step™, Long Step – High Skid, LH
					X	D350-591-312	Heli-Access-Step™, Long Step – High Skid, RH
1						D3078-041	STEP ASSEMBLY (HIGH-SHORT, LH)
	1					D3078-042	STEP ASSEMBLY (HIGH-SHORT, RH)
		1				D3168-041	STEP ASSEMBLY (LOW-SHORT, LH)
			1			D3168-042	STEP ASSEMBLY (LOW-SHORT, RH)
				1		D3272-041	STEP ASSEMBLY (HIGH-LONG, LH)
					1	D3272-042	STEP ASSEMBLY (HIGH-LONG, RH)
2	2	2	2	4	4	D2230-3	MOUNTING LUG
2	2	2	2	2	2	D2618	BUSHING
4	4	4	4			D2732-030	CUSHION
				2	2	D2856-400-720	ABRASION STRIP
2	2	2	2	2	2	D3235-1	MOUNTING LUG
				1	1	D3278-041	SUPPORT ASSEMBLY
2	2	2	2	2	2	AN3-35A	BOLT
				8	8	AN4-13A	BOLT
4	4	4	4			AN4-15A	BOLT
2	2	2	2	2	2	AN5-36A	BOLT
4	4	4	4	4	4	NAS1149D0363J	WASHER (AN960JD10)
12	12	12	12	16	16	NAS1149D0463J	WASHER (AN960JD416)
4	4	4	4	4	4	NAS1149D0563J	WASHER (AN960JD516)
2	2	2	2	2	2	MS21042L3	NUT
6	6	6	6	8	8	MS21042L4	NUT
2	2	2	2	2	2	MS21042L5	NUT
				1	1	*DSI 9410-011	STEP MODIFICATION KIT

*DSI 9410-011 Step Modification Kits are provided with all D350-591-311 and D350-591-312 Steps. This kit is provided as an option for the installer and is therefore **NOT REQUIRED** to complete the installation of the D350-591-311 or D350-591-312 Steps. Refer to Figure 15 for installation of the DSI 9410-011 Kit.

REFERENCE ONLY

REFERENCE ONLY

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-591 REV. G AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D350-591 REV. 3
REF TCCA STC: SH92-6
REF FAA STC: SH967NE

1.0 Purpose

It has come to DART's attention that it may be difficult to fasten the D350-591-133 Aft Maintenance Step and D350-591-213/-214 Heli-Access-Step Installations to the forward crosstube due to variations between crosstubes. For this reason, DART is adding the D3338-1 Mounting Lug to the D350-591-133 Aft Maintenance Step and D350-591-213/-214 Heli-Access-Step Kits at CHG 004 and later.

For D350-591-133 Aft Maintenance Step and D350-591-213/-214 Heli-Access-Step Kits at CHG 003 and earlier, DSI 9712-011 Mounting Lug Kit can be procured from DART. The kit contains all parts to upgrade a single step kit.

2.0 Installation

- 2.1 It is acceptable to install the D3338-1 Mounting Lug in lieu of the D2230-1 Mounting Lug as required to reduce the gap between step and the forward crosstube in accordance with the figures of this service instruction.
- 2.2 The height to set up the D350-591-133 Maintenance Step has been revised from 7.0in to 6.0in $\pm$ 1.0in to provide more flexibility. See sheet 2 of this service instruction.
- 2.3 In all other respects, install the D350-591-133 Aft Maintenance Step and D350-591-213/-214 Heli-Access-Steps in accordance with Section 3.1 of Installation Instructions D350-591 or Section 32.1 of Instructions for Continued Airworthiness ICA-D350-591.

3.0 Parts List Change

The following additional part is provided with D350-591-133 Aft Maintenance Step and D350-591-213/-214 Heli-Access-Steps at CHG 004:

Qty -133	Qty -213	Qty -214	Part Number	Description
X			D350-591-133	Heli-Access-Step™, Aft Maintenance Step
	X		D350-591-213	Heli-Access-Step™, Short Step – High Skid, LH
		X	D350-591-214	Heli-Access-Step™, Short Step – High Skid, RH
1	1	1	D3338-1	MOUNTING LUG (ADD)

4.0 DSI 9712-011 Mounting Lug Kit Parts List

For existing D350-591-133 Aft Maintenance Steps and D350-591-213/-214 Heli-Access-Steps at CHG 003 or earlier, one DSI 9712-011 kit upgrades one step installation:

Qty -011	Part Number	Description
X	DSI 9712-011	Mounting Lug Kit
1	D3338-1	MOUNTING LUG

REFERENCE ONLY

5.0 Weight and Balance

There is a negligible weight change associated with this modification.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: [Signature]
D. SHEPHERD (DE # 02)

DATE: 14.12.04
CERT. NO.: SH92-6
ISSUE NO.: 11

A	NEW ISSUE	MB	14.10.22
REV.	DESCRIPTION	BY	DATE
DESIGN	<u>[Signature]</u>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<u>[Signature]</u>		
CHECKED	<u>[Signature]</u>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9712	SHEET 1 OF 3
APPROVED	<u>[Signature]</u>	TITLE	SCALE
DE APPR.	<u>[Signature]</u>	INSTALLATION OPTION	NTS
DATE	14.10.22	COPYRIGHT © 2014 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	